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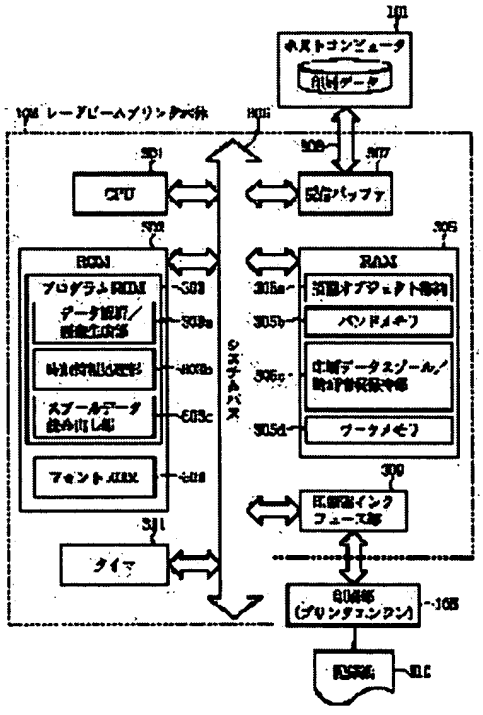
(54) PRINTING CONTROLLER, DATA PROCESSING METHOD FOR THE SAME AND STORAGE MEDIUM STORING PROGRAM WHICH COMPUTER CAN READ

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent received or obtained information from being competed and from delaying output by discriminating the designation state of output start time of information obtained from a data processor and an information supply source and controlling the immediate output and designation time output of obtained information.

SOLUTION: A judgment means (a time information processing part 303b stored in a ROM 302) analyzes printing information and judges whether time is designated or not. An output control means (a time information processing part 303 stored in the ROM 302) compares designated output start time with present time measured by a timer 311 and outputs picture data



generated based on printing information at designated time to a printing part when time designation output is judged to be designated. When time designation output is judged to be not designated, the output control means immediately outputs picture data generated based on received printing information to the printing part.

LEGAL STATUS

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* NOTICES *

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2.**** shows the word which can not be translated.
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CLAIMS

[Claim(s)]
[Claim 1] A time-of-day measurement means to be the print control unit which processes the printed information which receives from a data processor through predetermined communication media, and to measure current time, A judgment means to judge whether this printed information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said printed information by said judgment means The image data which compares the output start time specified with the current time currently measured by said time-of-day measurement means, and is generated based on said printed information at the appointed time of day is made to output to the printing section. The print control unit characterized by having the output-control means to which the image data generated based on said printed information which received instancy is made to output to the printing section when it judges with the time designated output not being specified to said printed information by said judgment means.
[Claim 2] Said output-control means is the print control unit according to claim 1 characterized by to make the printed information which received usually output to the sequential aforementioned printing section when progressing rather than the current time when said output start time specified is measured by said time-of-day measurement means the current time when the printed information which received till this output start time spools to a storage means at, and said output start time specified is measured by said time-of-day measurement means, an EQC, or when it is behind.
[Claim 3] Said output-control means is a print control unit according to claim 2 characterized by registering the output start time specified into said memory resource with the information which identifies this printed information in case the printed information which received till this output start time is spooled to a storage means, when progressing rather than the current time when said output start time specified is measured by said time-of-day measurement means.
[Claim 4] It is the print control unit with which are recording management of the updating of a data processor or the information on desired is enabled through predetermined communication media and in which a resource center and a communication link are possible. A receiving means to receive the reference place information for acquiring the information on desired from said resource center from said data processor, A time-of-day measurement means to measure current time, and a judgment means to judge whether said reference place information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said reference place information by said judgment means The output start time specified for every time of day which is in agreement with the current time currently measured by said time-of-day measurement means The information on the request which communicates with a specific resource center and is accumulated based on said reference place information is acquired. The acquisition control means which acquires the information on the request which communicates with a specific resource center based on said reference place information instancy, and is accumulated when it judges with the time designated output not being specified to said reference place information by said judgment means, A conversion means to change the information on said request acquired said every time of day and immediately by said acquisition control means into the

image data in which the output of the printing section is possible, The print control unit characterized by having an output-control means to make said image data changed by said conversion means output to said printing section.
[Claim 5] Said reference place information is a print control unit according to claim 4 characterized by considering as the address information for accessing a specific resource center with a predetermined protocol through said communication media.
[Claim 6] Said address information is a print control unit according to claim 5 characterized by considering as the uniform resource locator of the Internet.
[Claim 7] It is the print control unit according to claim 1 which has the 1st setting means which sets up the output condition over said printed information, and is characterized by said output-control means controlling the output state of the same image data generated to said printing section according to the output schedule set up based on the output condition set up by said 1st setting means.
[Claim 8] Said 1st setting means is a print control unit according to claim 7 characterized by enabling a setup of the combination of the arbitration of the count of an output, output spacing, and output start time as said output condition.
[Claim 9] It is the print control unit according to claim 4 which has the 2nd setting means which sets up the output condition over the information on the request acquired by said acquisition control means, and is characterized by said output-control means controlling the output state of the same image data changed to said printing section according to the output schedule set up based on the output condition set up by said 2nd setting means.
[Claim 10] Said 2nd setting means is a print control unit according to claim 9 characterized by enabling a setup of the combination of the arbitration of the count of an output, output spacing, and output start time as said output condition.
[Claim 11] It is the print control unit according to claim 1 which has a time designated output and the 3rd setting means which usually sets up priority with an output, and is characterized by said output-control means controlling the output order of the image data which is generated to said printing section according to the priority set up based on the output condition set up by said 3rd setting means, and by which time-of-day assignment is carried out, and the image data usually outputted.
[Claim 12] It is the print control unit according to claim 4 which has a time designated output to the information on the request acquired by said acquisition control means, and the 4th setting means which usually sets up priority with an output, and is characterized by said output-control means controlling the output order of the image data changed to said printing section based on the priority set up by said 4th setting means.
[Claim 13] Said 3rd setting means is a print control unit according to claim 11 characterized by enabling a setup of the priority of the image data by which output specification is usually carried out, and the image data by which time-of-day output specification is carried out for every image data.
[Claim 14] Said 4th setting means is a print control unit according to claim 12 characterized by usually enabling a setup of the priority of output specification and time-of-day output specification for every information on the request acquired by said acquisition control means.
[Claim 15] Said output-control means is a print control unit according to claim 1 or 4 characterized by notifying that a delay output is carried out when output initiation of a time designated output is slower than the appointed time of day.
[Claim 16] The judgment process which is the data-processing approach of the print control unit which processes the printed information which receives from a data processor through predetermined communication media, and judges whether this printed information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said printed information according to said judgment process The image data which compares the output start time specified with the current time currently measured, and is generated based on said printed information at the appointed time of day is made to output to the printing section. The data-processing approach of the print control unit characterized by having the output process to which the image data generated based on said printed information which received instancy is made to output to the printing section when it judges

with the time designated output not being specified to said printed information according to said judgment process.
[Claim 17] Said output process is the data-processing approach of the print control unit according to claim 16 characterized by to make the printed information which received usually output to the sequential aforementioned printing section when progressing rather than the current time when said output start time specified is measured the current time when the printed information which received till this output start time is spooled to a storage means at, and said output start time specified is measured, an EQC, or when it is behind.
[Claim 18] Said output process is the data-processing approach of the print control unit according to claim 17 characterized by registering the output start time specified into said memory resource with the information which identifies this printed information in case the printed information which received till this output start time is spooled to a storage means, when progressing rather than the current time when said output start time specified is measured.
[Claim 19] It is the data-processing approach of the print control unit in which a resource center and a communication link are possible that are recording management of the updating of a data processor or the information on desired is enabled through predetermined communication media. The receiving process which receives the reference place information for acquiring the information on desired from said resource center from said data processor, The judgment process which judges whether said reference place information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said reference place information according to said judgment process For every time of day which is in agreement with the current time when the output start time specified is measured The information on the request which communicates with a specific resource center and is accumulated based on said reference place information is acquired. The acquisition process which acquires the information on the request which communicates with a specific resource center based on said reference place information instancy, and is accumulated when it judges with the time designated output not being specified to said reference place information according to said judgment process, The conversion process which changes the information on said request acquired said every time of day and immediately according to said acquisition process into the image data in which the output of the printing section is possible, The data-processing approach of the print control unit characterized by having the output process which makes said image data changed according to said conversion process output to said printing section.
[Claim 20] Said reference place information is the data-processing approach of the print control unit according to claim 19 characterized by considering as the address information for accessing a specific resource center with a predetermined protocol through said communication media.
[Claim 21] Said address information is the data-processing approach of the print control unit according to claim 20 characterized by considering as the uniform resource locator of the Internet.
[Claim 22] It is the data-processing approach of the print control unit according to claim 19 which has the 1st setting process which sets up the output condition over said printed information, and is characterized by said output process changing the output state of the same image data generated to said printing section according to the output schedule set up based on the output condition set up according to said 1st setting process.
[Claim 23] Said 1st setting process is the data-processing approach of the print control unit according to claim 22 characterized by enabling a setup of the combination of the arbitration of the count of an output, output spacing, and output start time as said output condition.
[Claim 24] It is the data-processing approach of the print control unit according to claim 19 which has the 2nd setting process which sets up the output condition over the information on the request acquired by said acquisition process, and is characterized by said output process changing the output state of the same image data changed to said printing section according to the output schedule set up based on the output condition set up according to said 2nd setting process.
[Claim 25] Said 2nd setting process is the data-processing approach of the print control unit according to claim 24 characterized by enabling a setup of the combination of the arbitration of the count of an

output, output spacing, and output start time as said output condition.
[Claim 26] It is the data-processing approach of the print control unit according to claim 19 which has a time designated output and the 3rd setting process which usually sets up priority with an output, and is characterized by for said output process to change the output order of the image data which is generated to said printing section according to the priority set up based on the output condition set up according to said 3rd setting process, and by which time-of-day assignment is carried out, and the image data usually outputted.
[Claim 27] It is the data-processing approach of the print control unit according to claim 19 which has a time designated output to the information on the request acquired by said acquisition process, and the 4th setting process which usually sets up priority with an output, and is characterized by said output process controlling the output order of the image data changed to said printing section based on the priority set up according to said 4th setting process.
[Claim 28] Said 3rd setting process is the data-processing approach of the print control unit according to claim 26 characterized by enabling a setup of the priority of the image data by which output specification is usually carried out, and the image data by which time-of-day output specification is carried out for every image data.
[Claim 29] Said 4th setting process is the data-processing approach of the print control unit according to claim 27 characterized by usually enabling a setup of the priority of output specification and time-of-day output specification for every information on the request acquired by said acquisition process.
[Claim 30] Said output process is the data-processing approach of the print control unit according to claim 16 or 19 characterized by notifying that a delay output is carried out when output initiation of a time designated output is slower than the appointed time of day.
[Claim 31] It is the storage which stored the program which the computer which controls the airline printer which processes the printed information which receives from a data processor through predetermined communication media can read. The judgment process which judges whether this printed information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said printed information according to said judgment process The image data which compares the output start time specified with the current time currently measured, and is generated based on said printed information at the appointed time of day is made to output to the printing section. The output process to which the image data generated based on said printed information which received instancy when it judges with the time designated output not being specified to said printed information according to said judgment process is made to output to the printing section, The storage which stored the program which the computer characterized by ****(ing) can read.
[Claim 32] Said output process is the storage stored the program which the computer according to claim 31 characterized by to make the printed information which received usually output to the sequential aforementioned printing section when progressing rather than the current time when said output start time specified is measured the current time when the printed information which received till this output start time spools to a storage means at, and said output start time specified is measured, an EQC, or when it is behind can read.
[Claim 33] Said output process is the storage which stored the program which the computer according to claim 32 characterized by to register the output start time specified into said memory resource with the information which identifies this printed information in case the printed information which received till this output start time is spooled to a storage means, when progressing rather than the current time when said output start time specified is measured can read.
[Claim 34] They are the resource center by which are recording management of the updating of a data processor or the information on desired is enabled through predetermined communication media, and the storage which stored the program which the computer which controls the airline printer which can be communicated can read. The receiving process which receives the reference place information for acquiring the information on desired from said resource center from said data processor, The judgment process which judges whether said reference place information is analyzed and the time designated output is specified, When it judges with the time designated output being specified to said reference

place information according to said judgment process For every time of day which is in agreement with the current time when the output start time specified is measured The information on the request which communicates with a specific resource center and is accumulated based on said reference place information is acquired. The acquisition process which acquires the information on the request which communicates with a specific resource center based on said reference place information instancy, and is accumulated when it judges with the time designated output not being specified to said reference place information according to said judgment process, The conversion process which changes the information on said request acquired said every time of day and immediately according to said acquisition process into the image data in which the output of the printing section is possible, The storage which stored the program which the computer characterized by having the output process which makes said image data changed according to said conversion process output to said printing section can read.

[Claim 35] Said reference place information is the storage which stored the program which the computer according to claim 34 characterized by considering as the address information for accessing a specific resource center with a predetermined protocol through said communication media can read.

[Claim 36] Said address information is the storage which stored the program which the computer according to claim 35 characterized by considering as the uniform resource locator of the Internet can read.

[Claim 37] It is the storage which has the 1st setting process which sets up the output condition over said printed information, and stored the program which the computer according to claim 34 characterized by said output process changing the output state of the same image data generated to said printing section according to the output schedule set up based on the output condition set up according to said 1st setting process can read.

[Claim 38] Said 1st setting process is the storage which stored the program which the computer according to claim 37 characterized by enabling a setup of the combination of the arbitration of the count of an output, output spacing, and output start time as said output condition can read.

[Claim 39] It is the storage which has the 2nd setting process which sets up the output condition over the information on the request acquired by said acquisition process, and stored the program which the computer according to claim 34 characterized by for said output process to change the output state of the same image data changed to said printing section according to the output schedule set up based on the output condition set up according to said 2nd setting process can read.

[Claim 40] Said 2nd setting process is the storage which stored the program which the computer according to claim 39 characterized by enabling a setup of the combination of the arbitration of the count of an output, output spacing, and output start time as said output condition can read.

[Claim 41] It is the storage which has a time designated output and the 3rd setting process which usually sets up priority with an output, and stored the program which the computer according to claim 34 characterized by for said output process to change the output order of the image data which is generated to said printing section according to the priority set up based on the output condition set up according to said 3rd setting process, and by which time-of-day assignment is carried out, and the image data usually outputted can read.

[Claim 42] It is the storage which has a time designated output to the information on the request acquired by said acquisition process, and the 4th setting process which usually sets up priority with an output, and stored the program which the computer according to claim 34 characterized by for said output process to control the output order of the image data changed to said printing section based on the priority set up according to said 4th setting process can read.

[Claim 43] Said 3rd setting process is the storage which stored the program which the computer according to claim 41 characterized by enabling a setup of the priority of the image data by which output specification is usually carried out, and the image data by which time-of-day output specification is carried out for every image data can read.

[Claim 44] Said 4th setting process is the storage which stored the program which the computer according to claim 42 characterized by usually enabling a setup of the priority of output specification and time-of-day output specification for every information on the request acquired by said acquisition

process can read.
[Claim 45] Said output process is the storage which stored the program which the computer according to claim 31 or 34 characterized by notifying that a delay output is carried out when output initiation of a time designated output is slower than the appointed time of day can read.

[Translation done.]

* NOTICES *

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram showing the outline configuration of the print control unit which can apply this invention.
[Drawing 2] It is the sectional view showing the internal configuration of the laser beam printer shown in drawing 1 .
[Drawing 3] It is a block diagram explaining the control configuration of the print control unit in which the 1st operation gestalt of this invention is shown.
[Drawing 4] the time of the output initiation transmitted to an image output unit from the host computer shown in drawing 3 -- an engraving -- a law -- it is drawing showing the configuration of an instruction.
[Drawing 5] It is the flow chart which shows an example of the 1st data-processing procedure in the print control unit concerning this invention.
[Drawing 6] It is the flow chart which shows an example of the 2nd data-processing procedure in the print control unit concerning this invention.
[Drawing 7] It is drawing explaining the link situation of the data format of the output initiation time information stored in the time information attaching part shown in drawing 3 , and corresponding print data.
[Drawing 8] It is the block diagram showing an example of the image processing system which can apply the print control unit concerning this invention.
[Drawing 9] It is a block diagram explaining the control configuration of the print control unit in which the 2nd operation gestalt of this invention is shown.
[Drawing 10] It is the flow chart which shows an example of the 3rd data-processing procedure in the print control unit concerning this invention.
[Drawing 11] the time of the output initiation in the print control unit in which the 3rd operation gestalt of this invention is shown -- an engraving -- a law -- it is drawing showing the configuration of an instruction.
[Drawing 12] It is the flow chart which shows an example of the 3rd data-processing procedure in the print control unit concerning this invention.
[Drawing 13] It is drawing showing the configuration of the time information attaching part in the print control unit in which the 4th operation gestalt of this invention is shown, and the print-data spool section.
[Drawing 14] It is drawing explaining the memory map of the storage which stores the various data-processing programs which can be read by the printing system which can apply the print control unit concerning this invention.
[Drawing 15] It is drawing explaining the printing job output gestalt of the image processing system which can apply the conventional image output unit.
[Description of Notations]
101 Host Computer
102 Image Output Unit

301 CPU
303 Program ROM
303b Time-of-day information processing section
303c Spool data readout section
305 RAM
305a Drawing object storing section
305b Band memory
305c A print-data spool / time information attaching part
305d Work-piece memory
311 Timer

[Translation done.]